Registration of Crop Varieties

REGISTRATION OF WINALTA WHEAT
(Reg. No. 426)

M. N. Grant

"WINALTA", CI 13670, is a hard red winter wheat (Triticum aestivum L.) selected from the cross Minter × Wichita made at the Research Station, Lethbridge, Alberta, Canada, in 1949. Plant selections made in F2 and F3 were placed in winter survival nurseries and later generations were subjected to artificial cold hardiness tests. The selection designated 4759–23 showed excellent milling and baking qualities in tests conducted by the Genetics and Plant Breeding Research Institute in Ottawa, and was licensed under the name Winalta in 1961. It was entered in the Northern Regional Performance Nursery in 1962.

Winalta was released primarily because of its combination of superior winterhardiness with excellent milling and baking characteristics. In winterhardiness it is similar to Kharkov 22 MC, a variety slightly harder than Yogo. It is resistant to shattering.

Winalta has a winter habit of growth and is medium to late in maturity. The spike of Winalta is mid-dense, tapering, awned; chaff smooth and white; beaks 2 to 7 mm. long; shoulder narrow, oblique. The straw is white, mid-long, mid-strong, hollow. The kernels are light to medium red; opaque; middling to long, narrow, elliptical; germ small to mid-size, oval; cheeks rounded; crease narrow to mid-wide and shallow to mid-deep; brush small, mid-long. Back narrow, with side-hump, variable slope from shoulder to brush, shoulder narrow to mid-wide, mid-deep; skin smooth, base generally straight.

Winalta is susceptible to bunt. It is susceptible to leaf rust but has shown some resistance to race 56 of stem rust.

It is adapted to the traditional winter wheat growing areas of southern Alberta and southwestern Saskatchewan. About 5,000 bushels of certified seed were produced in Alberta in 1962. Its acceptance in those areas of the United States where superior winterhardiness is essential will depend on the results from current test programs.

Breeder seed will be maintained at the Research Station, Lethbridge, Alberta, Canada.

REGISTRATION OF CHINOOK WHEAT
(Reg. No. 427)

M. N. Grant and Hugh McKenzie

"CHINOOK", CI 13220, is a hard red spring wheat (Triticum aestivum L.) developed in Canada through the coordinated efforts of the Project Group on Breeding Spring Wheats for the Prairie Region. The cross Thatcher × $615-11$ was made in 1938 by A. W. Platt at the Cereal Division, Ottawa. The $615-11$ parent is a selection from a number of solid-stemmed spring wheats introduced from New Zealand and believed to have originated in Portugal. Early generation material was grown at the Experimental Farm, Swift Current, Saskatchewan, and final testing and distribution was completed at the Research Station, Lethbridge, Alberta, Canada.

Chinook is a spring wheat, medium early, about 2 weeks later than Thatcher. The straw is white, mid-strong, and pithy under most conditions. The solid stem is associated with its resistance to lodging. The spike is fusiform, mid-long, with short apical brush; smooth, white; glumes mid-long, mid-wide, shouldermid-wide, acute; kernels red, short to mid-long.

It is moderately resistant to some races of stem rust susceptible to race 15B; resistant to head blight; resistant to root rot; susceptible to leaf rust; moderate to bunt and loose smut.

The drought resistance of Chinook makes it well adapted to the dry prairie areas. In 1962 it was grown on about 40,000 acres in the southern parts of Alberta and Saskatchewan.

Breeder seed will be maintained at the Research Station, Lethbridge, Alberta, Canada.

REGISTRATION OF KHARKOV 22 MC WHEAT
(Reg. No. 428)

H. R. Klinck and M. N. Grant

"KHARKOV 22 MC" (Triticum aestivum L.) C.A.N. 6938, is a hard red winter wheat selected at Macdonald College, Quebec, in 1912. The selection was made from Kharkov, a variety of Russian origin introduced into the United States, and was released for commercial production in 1923.

Kharkov 22 MC has a winter habit of growth and is of particular interest because of its ability to withstand dry conditions. It is mid-season to late in maturity; mid-straw white, medium strong; ears red; spike mid-long, with white awns ranging from 1.3 to 2.9 inches in length; mid-size, mid-long, with white awns ranging from 1.3 to 2.9 inches in length; shoulders square; kernels red, mid-long, mid-wide; hard and ovate to elliptical; germ small; crease narrow to mid-wide and shallow; cheeks rounded; brush mid-size and mid-long.

Table 1. Average yields of 5 wheat varieties at several locations in Alberta, Canada.

<table>
<thead>
<tr>
<th>Year</th>
<th>Locations</th>
<th>Grain yield - bushels per 1000 grains</th>
<th>Kharkov 22 MC</th>
<th>Winalta</th>
<th>Cheyenne</th>
<th>Yogo</th>
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</thead>
<tbody>
<tr>
<td>1958</td>
<td>5</td>
<td>39.7</td>
<td>42.6</td>
<td>44.1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>1959</td>
<td>3</td>
<td>54.3</td>
<td>56.9</td>
<td>63.7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>3</td>
<td>31.6</td>
<td>35.7</td>
<td>34.3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>4</td>
<td>28.4</td>
<td>29.1</td>
<td>31.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1962</td>
<td>1</td>
<td>65.2</td>
<td>68.5</td>
<td>62.2</td>
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<td></td>
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Table 2. Average yields of 5 wheat varieties at several locations in Quebec, Canada.

<table>
<thead>
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<th>Year</th>
<th>Locations</th>
<th>Grain yield - bushels per 1000 grains</th>
<th>Kharkov 22 MC</th>
<th>Bideau</th>
<th>Richmond</th>
<th>Geese</th>
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</thead>
<tbody>
<tr>
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<td>39.8</td>
<td>34.6</td>
<td>36.2</td>
<td>32.9</td>
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